

RE: Definitions of CT and RME consumption rates

Elizabeth Allen to: POULSEN Mike

03/15/2012 11:14 AM

I like it. Thanks. I wasn't planning on introducing new definitions, by sticking with what was provided on the comments on the programmatic work plan, I think we remain on more solid ground.

E

POULSEN Mike

Elizabeth - I took a stab at reorganizing the text....

03/15/2012 11:06:21 AM

From: POULSEN Mike <POULSEN.Mike@deq.state.or.us>
To: Elizabeth Allen/R10/USEPA/US@EPA
Date: 03/15/2012 11:06 AM
Subject: RE: Definitions of CT and RME consumption rates

Elizabeth -

I took a stab at reorganizing the text. I can see the logic in first presenting the sources of the rates, and then showing how they are applied. I switched it to: here are the rates and how they were applied, and here are the sources of the rates. Another approach would be: here are the rates and the receptors, here are the sources of the rates, and here are how the rates were applied. I assume tribal consumption is handled separately.

I don't know if you also wanted me to comment on whether we designate the fish ingestion rates as CTE and RME for recreational, and RME for subsistence. This was the original EPA approach and it is OK with me.

- Mike

Fish consumption rates from published studies were used to describe the range of reasonably expected exposures relevant to the different populations known to occur in the Portland Harbor area. Three different rates were evaluated: 17.5 grams per day (approximately 2 eight-ounce meals per month), 73 g/ day (10 eight-ounce meals per month), and 142 g/day per day (19 eight-ounce meals per month). These rates were applied to two general types of fish consumers: "recreational fishers" intended to include those who may infrequently catch and consume fish and those who may do so on a more-or-less regular basis; and "subsistence fishers" to represent populations with high fish consumption rates, recognizing that fish are not the exclusive source of protein in their diet. 17.5 g/day is considered representative of a CT value for recreational fishers, and 73 g/day was selected as the RME value for representing the higher-end consumption practices of recreational fishers. The consumption rate of 142 g/day represents an RME value for higher rates of fish consumption, or subsistence fishers. No CT value was selected because the evaluations based on 17.5 g/day and 73 g/day inform the risks associated with lower consumption rates.

The rates of 17.5 g/day and 142 g/day represent the 90th and 99th percentiles, respectively, of per capita consumption of uncooked freshwater/estuarine finfish and shellfish by individuals (consumers and non-consumers) 18 or older, as reported in the Continuing Survey of Food Intakes by Individuals (CSFII) and described in EPA's Estimated Per Capita Fish Consumption in the United States (EPA 2002b). The CSFII surveys recorded food consumption for two non-consecutive days. "Consumers only" were defined as individuals who ate fish at least once

during the 2 day reporting period; individuals who reported not consuming any fish during the reporting period were designated as "non-consumers." For comparison, the 90th and 99th percentile consumption rates for consumers-only are 200 g/day and 506 g/day, respectively (EPA 2002b). Because of the short time period over which the survey is conducted, the results characterize the empirical distribution of average daily per capita consumption rather than describe true long-term average daily intakes. The consumption rate of 73 g/day is from a creel study conducted in the Columbia Slough, and represents the 95 percent upper confidence limit on the mean, where 75 percent of the mass of the total fish is consumed (Adolfson 1996).

-----Original Message-----

From: Elizabeth Allen [mailto:Allen.Elizabeth@epamail.epa.gov]
Sent: Thursday, March 08, 2012 4:00 PM
To: POULSEN Mike
Subject: Definitions of CT and RME consumption rates

Revised text for the risk assessment:

Fish consumption rates from published studies were used to describe the range of reasonably expected exposures relevant to the different populations known to occur in the Portland Harbor area. Three different rates were evaluated: 17.5 grams per day (approximately 2 eight ounce meals per month), 73 g/ day (10 eight ounce meals per month), and 142 g/day per day (19 eight ounce meals per month). The rates of 17.5 g/day and 142 g/day represent the 90th and 99th percentiles, respectively, of per capita consumption of uncooked freshwater/estuarine finfish and shellfish by individuals (consumers and non-consumers) 18 or older, as reported in the Continuing Survey of Food Intakes by Individuals (CSFII) and described in EPA's Estimated Per Capita Fish Consumption in the United States (EPA 2002b). The CSFII surveys recorded food consumption for two non-consecutive days. "Consumers only" were defined as individuals who ate fish at least once during the 2 day reporting period, individuals who reported not consuming any fish during the reporting period were designated as "non-consumers." For comparison, the 90th and 99th percentile consumption rates for consumers-only are 200 g/day and 506 g/day, respectively (EPA 2002b). Because of the short time period over which the survey is conducted, the results characterize the empirical distribution of average daily per capita consumption rather than describe true long-term average daily intakes.

The consumption rate of 73 g/day is from a creel study conducted in the Columbia Slough, and represents the 95 percent upper confidence limit on the mean, where 75 percent of the mass of the total fish is consumed (Adolfson 1996). The term "recreational fishers" is intended to encompass a broader spectrum of the population, including those who may infrequently catch and consume fish and those who may do so on a more-or-less regular basis. Accordingly, 17.5 g/day is considered representative of a CT value for recreational fishers, and 73 g/day was selected as the RME value for representing the higher-end consumption practices of recreational fishers. The consumption rate of 142 g/day represents a RME value for higher rates of

fish consumption, or subsistence fishers. No CT value was selected because the evaluations based on 17.5 g/day and 73 g/day inform the risks associated with lower consumption rates.